Complete Summary

GUIDELINE TITLE

Prevention of fall injuries in the older adult.

BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Prevention of falls and fall injuries in the older adult. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 57 p. [95 references]

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Falls and fall injuries

GUIDELINE CATEGORY

Management
Prevention
Risk Assessment

CLINICAL SPECIALTY

Family Practice
Geriatrics
Physical Medicine and Rehabilitation
Preventive Medicine

INTENDED USERS

Advanced Practice Nurses
Nurses

GUIDELINE OBJECTIVE(S)

- To present nursing best practice guidelines for the prevention of falls and fall injuries in the older adult
- To increase all nurses´ confidence, knowledge, skills and abilities in the identification of adults at risk of falling and to define interventions for prevention of falling

TARGET POPULATION

Older adults in acute care and long-term care settings in Canada at risk of falls and fall injuries

INTERVENTIONS AND PRACTICES CONSIDERED

Risk Assessment

1. Assessment of risk for falling
2. Identification of risk factors (intrinsic and extrinsic) associated with potential falls and fall injuries

Prevention/Management

1. Education of patients/family on factors affecting fall risk and prevention strategies and on dietary, life style and treatment choices for the prevention and management of osteoporosis
2. Individualized functional therapy program
3. Exploration of psychological effects of falls and/or fear of falling
4. Alternatives to restraint use prior to consideration of "least restraint" approaches
5. Minimization of medications that may increase risk of falls
6. Exercise programs
7. Use of assistive devices (such as mobility aids)
8. Transfer planning
9. Hip protectors
10. Environmental modifications to reduce risk of falls
11. "Post fall protocol"
12. Interdisciplinary collaboration on falls prevention and clinical management
13. Education and contextual approaches and strategies

MAJOR OUTCOMES CONSIDERED

- Risk for falls and fall injuries among older adults
- Reliability of risk assessment instruments
- Rates of falls and fall injuries among older adults
- Morbidity, mortality, and hospitalization rates related to falls

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

A systematic Internet search plus a literature search yielded a set of three (3) published best practice guidelines for prevention of falls in the older adult. A set of screening criteria was applied to each guideline and included whether the guideline was:

- Published in English
- Developed in 1996 or later
- Strictly about the topic area
- Evidence based e.g. contained references, description of evidence, sources of evidence
- Accessible as a complete document

After assessing guideline quality (see "Methods Used to Assess Quality and Strength of the Evidence" and "Rating Scheme for the Strength of the Evidence" fields), two documents were identified as high quality, relevant guidelines appropriate for use in the development of this guideline:

- Prevention of Falls, The University of Iowa Gerontological Nursing Interventions Research Center, Academic Institution, 1996
- Falls and Fall Risk, American Medical Directors Association (AMDA) and the American Health Care Association, 1997.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Two guidelines were evaluated using the Appraisal Instrument for Clinical Practice Guidelines, an adapted tool from Cluzeau, Littlejohns, Grimshaw, Feder & Moran (1997).

The following evidence rating taxonomy, adapted from the Scottish Intercollegiate Guidelines Network (SIGN), provides the definitions of the levels of evidence and the rating system used in this document:

Level Ia: Evidence obtained from meta-analysis of randomized controlled trials, plus consensus.

Level Ib: Evidence obtained from at least one randomized controlled trial, plus consensus.

Level II: Evidence obtained from at least one well-designed controlled study without randomization or evidence obtained from at least one other type of well-designed quasi-experimental study, plus consensus.

Level III: Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies, plus consensus.

Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities, plus consensus.

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not applicable

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A panel of nurses with expertise in falls prevention, education, and research, representing institutional, long-term care and academic settings was convened under the auspices of the Registered Nurses Association of Ontario (RNAO). The first task of the group was to review existing clinical practice guidelines in order to build on current understanding of falls prevention in the older adult, and to reach consensus on the scope of the guideline.

Two documents were identified as high quality, relevant guidelines appropriate for use in the development of this guideline: Prevention of Falls, The University of Iowa Gerontological Nursing Interventions Research Center, Academic Institution, 1996, and Falls and Fall Risk American Medical Directors Association (AMDA) and the American Health Care Association, 1997. A critique of systematic review articles and pertinent literature was also conducted to update the existing guidelines. Through a process of consensus, the recommendations in this guideline were developed.

This Registered Nurses Association of Ontario (RNAO) guideline is a synthesis of a number of source guidelines. The recommendations made in this nursing best practice guideline have been critically reviewed and categorized by level of

evidence. In order to fully inform the reader, every effort has been made to maintain the original level of evidence cited in the source document. No alterations have been made to the wording of the source documents involving recommendations based on randomized controlled trials or research studies. Where a source document has demonstrated an "expert opinion" level of evidence, wording may have been altered and the notation of RNAO Consensus Panel 2001 has been added.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Clinical Validation-Pilot Testing
External Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

An initial draft of the Registered Nurses Association of Ontario (RNAO) "Prevention of Falls and Fall Injuries in the Older Adult" nursing best practice guideline was reviewed by stakeholders and responses were incorporated. The stakeholders reviewing this guideline are acknowledged at the front of the original guideline document. This guideline was further refined after a seven-month pilot implementation phase in a selected practice setting in Ontario. Practice settings for RNAO nursing best practice guidelines are identified through a "request for proposal" process.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Definitions for the strength of evidence (Levels Ia, Ib, II-IV) are repeated at the end of the Major Recommendations.

General Principles

1. The client´s perspective, individual desires and needs are central to the application of the guideline.
2. The over-arching principle that guides the intervention choices is the principle of maintaining the highest quality of life possible while striving for a safe environment and practices. Risk taking, autonomy, and self-determination are supported, respected, and considered in the plan of interventions.
3. Together individuals, their significant other(s) and the care team engage in assessment and interventions through a collaborative process.

Substantive Recommendations

Assessment

Recommendation 1

Reduce fall-related risk factors through a fall prevention program.

(Level of Evidence II)

Recommendation 2

Assess fall risk.

(Level of Evidence III)

Recommendation 3

Identify intrinsic and extrinsic risk factors associated with potential falls and fall injuries, as the basis for individual and environmental multi-factorial intervention strategies.

(Level of Evidence III)

Recommendation 4

Inform individuals and their family when the individual is at high risk of falling. Explain to the person/family what risk factors they have for falls, and possible fall prevention strategies. Collaborate with the person and his/her family to honor individual choices.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Interventions

Recommendation 5

Implement multiple strategies targeted at risk factors to effectively reduce falls and fall injuries, as risk factors associated with falls are multi-factorial.

(Level of Evidence Ib)

Recommendation 6

Maximize the person´s abilities and capabilities guided by his/her response and activity tolerance.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 7

Incorporate restorative care procedures while accessing therapy services to assess and implement an individualized functional therapy program.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 8

Explore with individuals the psychological effects of falls and/or fear of falling, and the impact on their confidence to perform daily activities.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 9

In collaboration with the person/family, alternatives to restraint use must be implemented and proven to be ineffective, prior to consideration of "least restraint" approach.

(Level of Evidence 1b)

Recommendation 10

Provide non-pharmacological approaches for individuals with impaired cognition and emotional/behavioural care needs.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 11

Collaborate with the person, their physicians and pharmacists to minimize the use of benzodiazepines, the number of medications required, and the use of drugs with high risk for adverse side effects.

(Level of Evidence II)

Recommendation 12

In combination with other fall prevention strategies, participate in individual and/or group exercise programs, which are based on the individual´s functional ability, to help improve the person´s performance, strength, and balance.

(Level of Evidence 1b)

Recommendation 13

Use individually recommended, well designed and safe assistive devices (such as mobility aids) to reduce potential fall hazards (e.g. wheelchairs, walkers, canes in good repair, and adapted to person´s needs).

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 14

Use a transfer plan based on individualized assessment and re-evaluate the plan as the client´s functional status changes.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 15

Provide information on dietary, life style and treatment choices for the prevention and management of osteoporosis, in order to reduce the person´s risk of fracture.

(Level of Evidence 1b)

Recommendation 16

Use hip protectors where appropriate to decrease the risk of injury.

(Level of Evidence 1b)

Environment

Recommendation 17

Modify the environment to reduce potential fall hazards.

(Level of Evidence III)

Recommendation 18

Implement a "post fall protocol" for all individuals who experience a fall, and include the appropriate steps of assessment, immediate treatment and medical management, monitoring, evaluation of effectiveness of fall prevention strategies, and education.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

<u>Educational Recommendations</u>

Recommendation 19

Include in all entry-level nursing programs:

- Assessment skills for identifying older adults at risk for falls
- Fall prevention strategies

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 20

Enhance staff skill levels in assessment.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 21

Develop staff awareness of fall risk factors and potential prevention strategies.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 22

Educate nurses and student nurses on the role of health promotion in involving individuals and their significant others, in discussions around risk for falls and possible fall prevention strategies.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 23

Examine ethical and quality of life issues in light of an individual´s risk for falls.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 24

Core educational content areas to be included in a falls prevention program are:

- Exercise/activity & restorative programs for the frail elderly
- Transfer assessment
- Gait and balance assessment
- Standardization of the administration of selected assessment tools
- Alternatives to restraint use
- Current legislation on restraints
- Selected interventions focused on the prevention of functional decline: (e.g. cognitive impairment, continence care, and ambulation)
- Appropriate use of mobility aids
- Post fall assessment and follow-up care

(Level of Evidence IV – RNAO Consensus Panel, 2001)

<u>Contextual Recommendations</u>

Recommendation 25

Organizational policy should clearly support the specific role of nurses, as members of the interdisciplinary team, in assessment, mobilizing individuals and the use of mobility devices.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 26

Establish policy for "least restraint" environment as per the College of Nurses of Ontario standards and the current legislation.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 27

Establish low cost, high yield environmental and equipment changes, such as adjustments to lighting, availability of appropriate transfer devices, access to bed/chair alarm devices, high/low beds, and effective seating.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 28

Establish a supportive environment for the older person, that includes consideration of all physical, political, and social factors.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 29

Provide opportunities for interdisciplinary collaboration on falls prevention and clinical management, through access to health professionals with specialized knowledge in psychogeriatrics and rehabilitation.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 30

Policy for polypharmacy and the use of psychotropic medications should include: regular medication reviews, assessment for the need for benzodiazepines, and alternative strategies to support the behavioural needs of cognitively impaired persons.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 31

Ensure organizational policy for family presence support for 24 hour access/visiting.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 32

Ensure systems are in place to track meaningful and timely data on falls and related information, making this available to staff for review and evaluation for process improvement.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 33

Establish a "post fall follow-up and monitoring protocol".

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 34

Identify ongoing support for nurses to assist with clinical problem solving and the identification of fall preventative strategies.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 35

Provide support for research in the area of caring for the cognitively impaired with respect to mobility and fall prevention.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 36

Increase awareness of fall risk and fall prevention, among those persons working with older adults.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 37

Provide resources that enable older persons to participate in exercise programs and to maximize their opportunities for mobility and physical activity.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 38

Critical mass of professionals needs to be educated and supportive of nursing best practice guidelines in order to ensure sustainability of the guidelines. Develop resource champions for the guideline.

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Recommendation 39

Nursing best practice guidelines can be successfully implemented only where there is adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. In this regard, RNAO (through a panel of nurses, researchers and administrators) has developed The Toolkit for Implementing Clinical Practice Guidelines, based on available evidence, theoretical perspectives and consensus. The Toolkit is recommended for guiding the implementation of the RNAO nursing best practice guideline on "Prevention of Falls and Fall Injuries in the Older Adult".

(Level of Evidence IV – RNAO Consensus Panel, 2001)

Definitions:

Level of Evidence (adapted from the Scottish Intercollegiate Guidelines Network [SIGN])

Level Ia: Evidence obtained from meta-analysis of randomized controlled trials, plus consensus.

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Level IV: Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities, plus consensus.

Note: Where a source document has demonstrated an "expert opinion" level of evidence, wording may have been altered and the notation of Registered Nurses Association of Ontario (RNAO) Consensus Panel 2001 has been added. These recommendations are clearly marked as "RNAO Consensus Panel, 2001."

CLINICAL ALGORITHM(S)

An algorithm is provided in Appendix A of the original guideline document for fall prevention and management.

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Overall Potential Benefits

- Increased nurses´ confidence, knowledge, skills and abilities in the identification of adults at risk of falling and the ability to define interventions to prevent falls
- Decreased falls in older adults
- Decreased morbidity, mortality, and hospitalization rates related to falls

Nurses, other health care professionals and administrators who are leading and facilitating practice changes will find this document valuable for the development of policies, procedures, protocols, educational programs, assessment and documentation tools, etc.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

These best practice guidelines are related only to nursing practice and not intended to take into account fiscal efficiencies. These guidelines are not binding for nurses and their use should be flexible to accommodate client/family wishes and local circumstances. They neither constitute a liability or discharge from liability. While every effort has been made to ensure the accuracy of the contents at the time of publication, neither the authors nor Registered Nurses Association of Ontario (RNAO) give any guarantee as to the accuracy of the information contained in them nor accept any liability, with respect to loss, damage, injury or expense arising from any such errors or omission in the contents of this work. Any reference throughout the document to specific pharmaceutical products as examples does not imply endorsement of any of these products.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

Toolkit: Implementing Clinical Practice Guidelines

Nursing best practice guidelines can be successfully implemented only where there are adequate planning, resources, organizational and administrative support, as well as the appropriate facilitation. In this regard, Registered Nurses Association of Ontario (RNAO) (through a panel of nurses, researchers and administrators) has developed The Toolkit for Implementing Clinical Practice Guidelines, based on available evidence, theoretical perspectives and consensus.

The Toolkit is recommended for guiding the implementation of any clinical practice guideline in a health care organization.

The "Toolkit" provides step by step directions to individuals and groups involved in planning, coordinating, and facilitating the guideline implementation. Specifically, the "Toolkit" addresses the following key steps:

1. Identifying a well-developed, evidence-based clinical practice guideline
2. Identification, assessment and engagement of stakeholders
3. Assessment of environmental readiness for guideline implementation
4. Identifying and planning evidence-based implementation strategies
5. Planning and implementing evaluation
6. Identifying and securing required resources for implementation

Implementing guidelines in practice that result in successful practice changes and positive clinical impact is a complex undertaking. The "Toolkit" is one key resource for managing this process.

For specific recommendations regarding implementation of this guideline, refer to the "Major Recommendations" field.

Evaluation and Monitoring of Guideline

There are a number of indicators that an organization can consider, to evaluate the impact of implementing this guideline. Some examples are:

- Number of falls
- Number of fall injuries
- Types of injury
- Volume of restraint use
- Polypharmacy
- Prevalence of use of assistive devices
- Prevalence of activity program utilization
- Hydration status
- Functional Independence Measure (FIM) and Minimal Data Set (MDS) scores
- Staff satisfaction with protocol
- Client/Patient satisfaction
- Admission to long term care (LTC) associated with fall injury
- Number of admissions to rehab for fall related event
- Rehabilitation days related to fall
- Acute care days and operative procedures related to fall
- Volume of ambulance utilization related to falls
- Use of Fall Monitoring Log

Fall Monitoring

Severity of Injury Scale

1. No injury
2. Minor
    - abrasion

- contusion

3. Moderate to Serious
    - laceration
    - tissue tear
    - hematoma
    - impaired mobility due to injury
    - fear of subsequent fall
    - and fall injury
4. Serious
    - fracture
    - multiple fracture
    - subdural hematoma
    - head injury

Quick Reference Guides

The following tools are included in the Appendices of the original guideline:

- Fall Prevention and Management Framework – Residential Programs. See Appendix A of the original guideline
- Reference Guide for Assessment Tools for Specific Risk Factors. See Appendix B of the original guideline

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Staying Healthy

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Registered Nurses Association of Ontario (RNAO). Prevention of falls and fall injuries in the older adult. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 57 p. [95 references]

ADAPTATION

Two documents were identified as high quality, relevant guidelines appropriate for use in the development of this guideline:

- Prevention of Falls, The University of Iowa Gerontological Nursing Interventions Research Center, Academic Institution, 1996.

- Falls and Fall Risk, American Medical Directors Association (AMDA) and the American Health Care Association, 1997.

DATE RELEASED

2002 Jan

GUIDELINE DEVELOPER(S)

Registered Nurses Association of Ontario - Professional Association

SOURCE(S) OF FUNDING

Funding was provided by the Ontario Ministry of Health and Long Term Care.

GUIDELINE COMMITTEE

Not stated

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

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FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

The Registered Nurses Association of Ontario (RNAO) received funding from the Ministry of Health and Long-Term Care (MOHLTC). This guideline was developed by a panel of nurses and researchers convened by the RNAO and conducting its work independent of any bias or influence from the MOHLTC.

GUIDELINE STATUS

This is the current release of the guideline.

GUIDELINE AVAILABILITY

Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

AVAILABILITY OF COMPANION DOCUMENTS

The following are available:

- Quick reference guide. Fall prevention and management framework – residential programs. Appendix A. In: Prevention of falls and fall injuries in the older adult. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 57 p.
- Quick reference guide. Reference guide for assessment tools for specific risk factors. Appendix B In: Prevention of falls and fall injuries in the older adult. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 57 p.

  Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

- Toolkit: implementation of clinical practice guidelines. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2002 Jan. 91 p.

  Electronic copies: Available in Portable Document Format (PDF) from the RNAO Web site

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

PATIENT RESOURCES

The following is available:

- Health information fact sheet. Reduce your risk for falls. Toronto (ON): Registered Nurses Association of Ontario (RNAO); 2003 Jul. 2 p.

Electronic copies: Available in Portable Document Format (PDF) from the Registered Nurses Association of Ontario (RNAO) Web site.

Print copies: Available from the Registered Nurses Association of Ontario (RNAO), Nursing Best Practice Guidelines, 438 University Avenue, Suite 1600, Toronto, Ontario, M5G 2K8; Fax: (416) 599-1926; Order forms available on the RNAO Web site.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

NGC STATUS

This NGC summary was completed by ECRI on December 17, 2003. The information was verified by the guideline developer on January 16, 2004.

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